

# RS Means Cost Data

# RS Means Guide

- Unit Price Section
  - Costs per unit including materials, equipment, labor, overhead, and profit
- Assemblies Section
  - Cost for typical “assemblies” such as a sidewalk or a reinforced concrete footing
- Reference Section
  - Crew listings used to get labor costs
  - Cost indices to adjust for location and year

# 1

## Division Number | Title

<b>02700   Bases, Ballasts, Pavements &amp; Appurtenances</b>										
<b>02740   Flexible Pavement</b>		CREW	DAILY OUTPUT	LABOR-HOURS	UNIT	2001 BARE COSTS				TOTAL INCL O&P
						MAT.	LABOR	EQUIP.	TOTAL	
300	0010 ASPHALTIC CONCRETE PAVEMENT for highways and large paved areas									300
	0810 Binder course, 1-1/2" thick	B-25	630	.128		26	3.89	2.71	32.21	37
	0811 2" thick		690	.128		26	2.76	2.47	31.67	
	0812 3" thick		800	.110		26	2.60	2.13	30.89	
	0813 4" thick		850	.104		26	4.26	2.01	30.61	37.50
	0850 wearing course, 1" thick	B-25B	575	.167		28.50	3.33	3.33	36.09	42
	0851 1-1/2" thick		630	.152		28.50	3.89	3.04	35.43	41
	0852 2" thick		690	.139		28.50	3.55	2.78	34.83	40
	0853 2-1/2" thick		745	.129		28.50	3.29	2.57	34.36	39.50
	0854 3" thick		800	.120		28.50	3.06	2.40	33.96	39
	1000 Pavement replacement over trench, 2" thick	B-37	90	.533	S.Y.	3.20	12.90	1.48	17.58	25
	1050 4" thick		70	.686		6.35	16.55	1.91	24.81	35

### 02740 | Flexible Pavement

# ***CSI MASTERFORMAT™ Divisions***

- Division 01 — General Requirements
- Division 02 — Site Construction
- Division 03 — Concrete
- Division 04 — Masonry
- Division 05 — Metals
- Division 06 — Wood and Plastics
- Division 07 — Thermal and Moisture Protection
- Division 08 — Doors and Windows
- Division 09 — Finishes
- Division 10 — Specialties
- Division 11 — Equipment
- Division 12 — Furnishing
- Division 13 — Special Construction
- Division 14 — Conveying Systems
- Division 15 — Mechanical
- Division 16 — Electrical

# ***Division 2 – Site Construction***

02050 Basic Site Materials and Methods

02100 Site Remediation

02200 Site Preparation

→ 02300 Earthwork

02400 Tunneling, Boring, and Jacking

02450 Foundation and Load-bearing Elements

02500 Utility Services

02600 Drainage and Containment

→ 02700 Bases, Ballasts, and Pavements

02800 Site Improvements and Amenities

02900 Planting

02950 Site Restoration and Rehabilitation

# ***02300 - Earthwork***

02310	Grading	Finish Grading Rough Grading
02315	Excavation and Fill	Backfill Borrow Excavation Compaction Excavation Fill Trenching
02325	Dredging	
02330	Embankment	Armoring Earth Dams Soil Embankment

# ***02300 - Earthwork***

02335	Subgrade and Roadbed	Pre-watering of Excavation Areas Reconditioning Subgrade Modification
02340	Soil Stabilization	Asphalt Soil Stabilization Cement Soil Stabilization Geotextile Soil Stabilization Lime Slurry Soil Stabilization Lime Soil Stabilization Pressure Grouting Soil Stabilization
02360	Soil Treatment	Rodent Control Termite Control Vegetation Control

# ***02700 – Bases, Ballasts, Pavements***

02710	Bound Base Course	Aggregate-Bituminous Base Course Aggregate-Cement Base Course Asphalt-Treated Permeable Base Course Bituminous Concrete Base Course Cement-Stabilized Open-Graded Base Course Cement Treated Courses Cold-Recycled Bituminous Base Course Hydraulic Cement Concrete Base Course Lean Concrete Base Course Lime Treated Courses Lime-Fly-Ash Treated Courses Plain Cement Concrete Base Course
02720	Unbound Base and Ballast	Aggregate Subbase Aggregate Base Course Cracked and Seated PCC Base Course <u>Rubbelized PCC Base Course</u>



# ***02700 – Bases, Ballasts, Pavements***

02730	Aggregate Surfacing	Cinder Surfacing Crushed Stone Surfacing
02740	Flexible Pavement	Rubber Modified Bituminous Pavement Athletic Bituminous Pavement Bituminous Concrete Pavement Cold Mix Bituminous Pavement Fiber-Modified Bituminous Pavement Polymer-Modified Bituminous Pavement Stone and Split-Mastic Bituminous Pavement
02750	Rigid Pavement	CRCP Exposed Aggregate Pavement Plain PCC Pavement <u>Prestressed Reinforced PCC Pavement</u> Reinforced PCC Pavement Roller-Compacted PCC Pavement

# ***02700 – Bases, Ballasts, Pavements***

02785 Flexible Pavement Coating    Chip Seal  
Fog Seal  
Sand Seal  
Slurry Seal

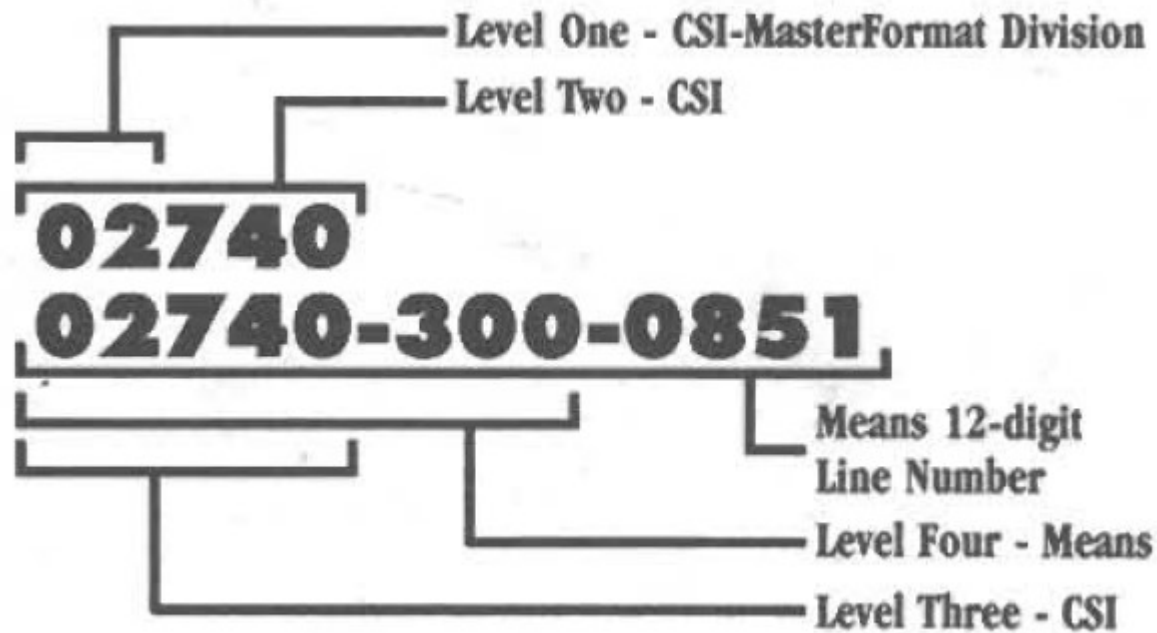
02795 Porous Pavement

# 2 Line Numbers

02700   Bases, Ballasts, Pavements & Appurtenances												
02740   Flexible Pavement												
300	0010	ASPHALTIC CONCRETE PAVEMENT for highways and large paved areas	CREW	DAILY OUTPUT	LABOR-HOURS	UNIT	2001 BARE COSTS				TOTAL INCL O&P	300
							MAT.	LABOR	EQUIP.	TOTAL		
	0020											
	0810	Binder course, 1-1/2" thick	B-25	630	.128		26	3.89	2.71	32.21	37	
	0811	2" thick		690	.128		26	2.76	2.47	31.67	37.50	
	0812	3" thick		800	.110		26	2.60	2.13	30.89	37.50	
	0813	4" thick		850	.104		26	4.26	2.01	30.61	37.50	
	0850	wearing course, 1" thick	B-25B	575	.167		28.50	3.33	3.33	36.09	42	
	0851	1-1/2" thick		630	.152		28.50	3.89	3.04	35.43	41	
	0852	2" thick		690	.139		28.50	3.55	2.78	34.83	40	
	0853	2-1/2" thick		745	.129		28.50	3.29	2.57	34.36	39.50	
	0854	3" thick		800	.120		28.50	3.06	2.40	33.96	39	
	1000	Pavement replacement over trench, 2" thick	B-37	90	.533	S.Y.	3.20	12.90	1.48	17.58	25	
	1050	4" thick		70	.686		6.35	16.55	1.91	24.81	35	

02740-300-0851

# 2 Line Numbers



# 3 Description

02700   Bases, Ballasts, Pavements & Appurtenances												
02740   Flexible Pavement												
300	0010	ASPHALTIC CONCRETE PAVEMENT for highways and large paved areas	CREW	DAILY OUTPUT	LABOR-HOURS	UNIT	2001 BARE COSTS				TOTAL INCL O&P	300
							MAT.	LABOR	EQUIP.	TOTAL		
	0020											
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	0812	3" thick		800	.110		26	2.60	2.13	30.89		
	0813	4" thick		850	.104		26	2.60	2.01	30.61	35.50	
	0850	wearing course, 1" thick	B-25B	575	.167		28.50	4.26	3.33	36.09	42	
	0851	1-1/2" thick		630	.152		28.50	3.89	3.04	35.43	41	
	0852	2" thick		690	.139		28.50	3.55	2.78	34.83	40	
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	1000	Pavement replacement over trench, 2" thick	B-37	90	.533	S.Y.	3.20	12.90	1.48	17.58	25	
	1050	4" thick		70	.686		6.35	16.55	1.91	24.81	35	

**Asphaltic Concrete Pavement Wearing Course 1½" Thick**

# 4 Reference Number Information

02700   Bases, Ballasts, Pavements & Appurtenances												
02740   Flexible Pavement												
300	0010	ASPHALTIC CONCRETE PAVEMENT for highways and large paved areas	CREW	DAILY OUTPUT	LABOR-HOURS	UNIT	2001 BARE COSTS				TOTAL INCL O&P	300
							MAT.	LABOR	EQUIP.	TOTAL		
	0020											
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	0812	3" thick		800	.110		26	2.60	2.13	30.89		
	0813	4" thick		850	.104		26	2.60	2.01	30.61	35.50	
	0850	wearing course, 1" thick	B-25B	575	.167		28.50	4.26	3.33	36.09	42	
	0851	1-1/2" thick		630	.152		28.50	3.89	3.04	35.43	41	
	0852	2" thick		690	.139		28.50	3.55	2.78	34.83	40	
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	0854	3" thick		800	.120		28.50	3.06	2.40	33.96	39	
	1000	Pavement replacement over trench, 2" thick	B-37	90	.533	S.Y.	3.20	12.90	1.48	17.58	25	
	1050	4" thick		70	.686		6.35	16.55	1.91	24.81	35	

R02065-300

# 5 Crew Designation

02700   Bases, Ballasts, Pavements & Appurtenances												
02740   Flexible Pavement												
300	0010	ASPHALTIC CONCRETE PAVEMENT for highways and large paved areas	CREW	DAILY OUTPUT	LABOR-HOURS	UNIT	2001 BARE COSTS				TOTAL INCL O&P	300
							MAT.	LABOR	EQUIP.	TOTAL		
	0020											
	0810	Binder course, 1-1/2" thick	B-25	630	.128		26	3.89	2.71	32.21	37	
	0811	2" thick		690	.128		26	2.76	2.47	31.67		
	0812	3" thick		800	.110		26	2.60	2.13	30.89		
	0813	4" thick		850	.104		26	2.60	2.01	30.61	35.50	
	0850	wearing course, 1" thick	B-25B	575	.167		28.50	4.26	3.33	36.09	42	
	0851	1-1/2" thick		630	.152		28.50	3.89	3.04	35.43	41	
	0852	2" thick		690	.139		28.50	3.55	2.78	34.83	40	
	0853	2-1/2" thick		745	.129		28.50	3.29	2.57	34.36	39.50	
	0854	3" thick		800	.120		28.50	3.06	2.40	33.96	39	
	1000	Pavement replacement over trench, 2" thick	B-37	90	.533	S.Y.	3.20	12.90	1.48	17.58	25	
	1050	4" thick		70	.686		6.35	16.55	1.91	24.81	35	

B-25

# 5 Crew Designation

<b>Crews</b>						
<b>Crew No.</b>	<b>Bare Costs</b>		<b>Incl. Subs O &amp; P</b>		<b>Cost Per Labor-Hour</b>	
	<b>Hr.</b>	<b>Daily</b>	<b>Hr.</b>	<b>Daily</b>	<b>Bare Costs</b>	<b>Incl. O&amp;P</b>
<b>Crew B-25B</b>						
1 Labor Foreman	\$24.85	\$198.80	\$38.90	\$311.20	\$25.52	\$39.41
7 Laborers	22.85	1279.60	35.75	2002.00		
4 Equip. Oper. (medium)	30.35	971.20	45.95	1470.40		
1 Asphalt Paver, 130 H.P.		1281.00		1409.10		
2 Rollers, Steel Wheel		420.80		462.90		
1 Roller, Pneumatic Wheel		215.60		237.15	19.97	21.97
96 L.H., Daily Totals		\$4367.00		\$5892.75	\$45.49	\$61.38

**12 people × 8 hours/day = 96 L.H. Daily**



# 6 Productivity

02700   Bases, Ballasts, Pavements & Appurtenances											
02740   Flexible Pavement											
300	0010	ASPHALTIC CONCRETE PAVEMENT for highways and large paved areas	CREW	DAILY OUTPUT	LABOR-HOURS	UNIT	2001 BARE COSTS			TOTAL INCL O&P	300
							MAT.	LABOR	EQUIP.		
	0020										
	0810	Binder course, 1-1/2" thick	B-25	630	.128		26	3.89	2.71	32.21	37
	0811	2" thick		690	.128		26	2.76	2.47	31.67	37.50
	0812	3" thick		800	.110		26	2.60	2.13	30.89	37.50
	0813	4" thick		850	.104		26	4.26	2.01	30.61	37.50
	0850	Wearing course, 1" thick	B-25B	575	.167		28.50	3.33	3.33	36.09	42
	0851	1-1/2" thick		630	.152		28.50	3.89	3.04	35.43	41
	0852	2" thick		690	.139		28.50	3.55	2.78	34.83	40
	0853	2-1/2" thick		745	.129		28.50	3.29	2.57	34.36	39.50
	0854	3" thick		800	.120		28.50	3.06	2.40	33.96	39
	1000	Pavement replacement over trench, 2" thick	B-37	90	.533	S.Y.	3.20	12.90	1.48	17.58	25
	1050	4" thick		70	.686		6.35	16.55	1.91	24.81	35

**Daily Output = 630 Tons, Labor Hours = 0.152 Hours/Ton**

# 6 Productivity

Daily Output = Units per 8-hour Crew Day

Quantity	÷	Daily Output	=	Duration
12,000 Ton	÷	630 Ton/ Crew Day	=	19 Crew Days

Productivity Rate = Labor-Hours per Unit

Quantity	x	Productivity Rate	=	Duration
12,000 Ton	x	.152 Labor-Hours/ Ton	=	1824 Labor-Hours

# 7 Unit of Measure

02700   Bases, Ballasts, Pavements & Appurtenances												
02740   Flexible Pavement												
300	0010	ASPHALTIC CONCRETE PAVEMENT for highways and large paved areas	CREW	DAILY OUTPUT	LABOR-HOURS	UNIT	2001 BARE COSTS				TOTAL INCL O&P	300
							MAT.	LABOR	EQUIP.	TOTAL		
	0020											
	0810	Binder course, 1-1/2" thick	B-25	630	.128		26	3.89	2.71	32.21	37	
	0811	2" thick		690	.128		26	2.76	2.47	31.67	37.50	
	0812	3" thick		800	.110		26	2.60	2.13	30.89	37.50	
	0813	4" thick		850	.104		26	4.26	2.01	30.61	37.50	
	0850	wearing course, 1" thick	B-25B	575	.167		28.50	3.33	3.33	36.09	42	
	0851	1-1/2" thick		630	.152	S.Y.	28.50	3.89	3.04	35.43	41	
	0852	2" thick		690	.139		28.50	3.55	2.78	34.83	40	
	0853	2-1/2" thick		745	.129		28.50	3.29	2.57	34.36	39.50	
	0854	3" thick		800	.120		28.50	3.06	2.40	33.96	39	
	1000	Pavement replacement over trench, 2" thick	B-37	90	.533	S.Y.	3.20	12.90	1.48	17.58	25	
	1050	4" thick		70	.686		6.35	16.55	1.91	24.81	35	

**S.Y. = Square Yard of Surface Area**

# 8 Bare Costs

02700   Bases, Ballasts, Pavements & Appurtenances											
02740   Flexible Pavement											
300	0010	ASPHALTIC CONCRETE PAVEMENT for highways and large paved areas	CREW	DAILY OUTPUT	LABOR-HOURS	UNIT	2001 BARE COSTS			TOTAL INCL O&P	300
							MAT.	LABOR	EQUIP.		
	0020										
	0810	Binder course, 1-1/2" thick	B-25	630	.128		26	3.89	2.71	32.21	37
	0811	2" thick		690	.128		26	2.47		31.67	9
	0812	3" thick		800	.110		26	2.76	2.13	30.89	
	0813	4" thick		850	.104		26	2.60	2.01	30.61	7.50
	0850	Wearing course, 1" thick	B-25B	575	.167		28.50	4.26	3.33	36.09	42
	0851	1-1/2" thick		630	.152		28.50	3.89	3.04	35.43	41
	0852	2" thick		690	.139		28.50	3.55	2.78	34.83	40
	0853	2-1/2" thick		745	.129		28.50	3.29	2.57	34.36	39.50
	0854	3" thick		800	.120		28.50	3.06	2.40	33.96	39
	1000	Pavement replacement over trench, 2" thick	B-37	90	.533	S.Y.	3.20	12.90	1.48	17.58	25
	1050	4" thick		70	.686		6.35	16.55	1.91	24.81	35

**Material = \$28.50, Labor = \$3.89, Equipment = \$3.04**

# 5 Crew Designation

<b>Crews</b>						
Crew No.	Bare Costs		Incl. Subs O & P		Cost Per Labor-Hour	
	Hr.	Daily	Hr.	Daily	Bare Costs	Incl. O&P
Crew B-25B						
1 Labor Foreman	\$24.85	\$198.80	\$38.90	\$311.20	\$25.52	\$39.41
7 Laborers	22.85	1279.60	35.75	2002.00		
4 Equip. Oper. (medium)	30.35	971.20	45.95	1470.40		
1 Asphalt Paver, 130 H.P.		1281.00		1409.10		
2 Rollers, Steel Wheel		420.80		462.90		
1 Roller, Pneumatic Wheel		215.60		237.15	19.97	21.97
96 L.H., Daily Totals		\$4367.00		\$5892.75	\$45.49	\$61.38

Labor

Equip

**12 people × 8 hours/day = 96 L.H. Daily**

# 6 Productivity

02700   Bases, Ballasts, Pavements & Appurtenances											
02740   Flexible Pavement											
300	0010	ASPHALTIC CONCRETE PAVEMENT for highways and large paved areas	CREW	DAILY OUTPUT	LABOR-HOURS	UNIT	2001 BARE COSTS			TOTAL INCL O&P	300
							MAT.	LABOR	EQUIP.		
	0020										
	0810	Binder course, 1-1/2" thick	B-25	630	.128		26	3.89	2.71	32.21	37
	0811	2" thick		690	.128		26	2.76	2.47	31.67	37.50
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	0813	4" thick		850	.104		26	4.26	2.01	30.61	37.50
	0850	wearing course, 1" thick	B-25B	575	.167		28.50	3.33	3.33	36.09	42
	0851	1-1/2" thick		630	.152		28.50	3.89	3.04	35.43	41
	0852	2" thick		690	.139		28.50	3.55	2.78	34.83	40
	0853	2-1/2" thick		745	.129		28.50	3.29	2.57	34.36	39.50
	0854	3" thick		800	.120		28.50	3.06	2.40	33.96	39
	1000	Pavement replacement over trench, 2" thick	B-37	90	.533	S.Y.	3.20	12.90	1.48	17.58	25
	1050	4" thick		70	.686		6.35	16.55	1.91	24.81	35

**Daily Output = 630 Tons, Labor Hours = 0.152 Hours/Ton**

# 8

## Bare Costs

### Labor Costs

<b>Labor-Hour Cost Crew B-25B</b>	<b>x</b>	<b>Labor-Hour Units</b>	<b>=</b>	<b>Labor</b>
\$25.52	x	.152	=	\$3.89

### Equipment Costs

<b>Equipment Cost Crew B-25B</b>	<b>x</b>	<b>Labor-Hour Units</b>	<b>=</b>	<b>Equip.</b>
\$19.97	x	.152	=	\$3.04



## **Total Costs Including O&P**

**Total Cost = Bare Material Cost + 10% Profit  
+ Bare Labor Cost + Overhead + 10% Profit  
+ Bare Equipment Cost + 10% Profit**



# RS Means Cost Data

<b>02700 Bases, Ballasts, Pavements &amp; Appurtenances</b>									
<b>02710 Bound Base Courses</b>		<b>CREW</b>	<b>DAILY OUTPUT</b>	<b>LABOR HOURS</b>	<b>2006 BARE COSTS*</b>				
					<b>UNIT</b>	<b>MAT.</b>	<b>LABOR</b>	<b>EQUIP.</b>	<b>TOTAL</b>
100	0010 <b>AGGREGATE-BITUMINOUS BASE COURSE</b> for roadways								
	0500 Bituminous concrete, 4" thick	B-25	4545	0.019	S.Y.	18.20	.58	.47	19.25
	0550 6" thick		3700	0.024		26.76	.72	.57	28.05
	0560 8" thick		3000	0.029		35.65	.88	.71	37.24
	0570 10" thick		2545	0.035		43.89	1.04	.83	45.76
200	0010 <b>ASPHALT-TREATAED PERMEABLE BASE COURSE</b> for roadways								
	1000 Macadam penetration crushed stone, 4" thick, 2 gal. per S.Y.	B-45	6000	0.003	S.Y.	12.00	.09	.09	12.18
	1100 6" thick, 3 gal. per S.Y.		4000	0.004		18.00	.13	.13	18.26
	1200 8" thick, 4 gal. per S.Y.		3000	0.005		24.00	.17	.18	24.35
<b>02720 Unbound Base Courses &amp; Ballasts</b>		<b>CREW</b>	<b>DAILY OUTPUT</b>	<b>LABOR HOURS</b>	<b>2006 BARE COSTS*</b>				
					<b>UNIT</b>	<b>MAT.</b>	<b>LABOR</b>	<b>EQUIP.</b>	<b>TOTAL</b>
200	0010 <b>AGGREGATE BASE COURSE</b> for roadways								
	0301 Crushed 3/4" stone base compacted to 3" deep	B-36C	5200	0.008	S.Y.	2.69	.26	.51	3.46
	0302 6" deep		5000	0.008		5.40	.27	.53	6.20
	0303 9" deep		4600	0.009		8.05	.29	.58	8.92
	0304 12" deep		4200	0.010		10.75	.32	.63	11.70
	0301 Crushed 1-1/2" stone base compacted to 4" deep	B-36B	6000	0.011	S.Y.	4.25	.35	.50	5.10
	0302 6" deep		5400	0.012		6.40	.38	.56	7.34
	0303 8" deep		4500	0.014		8.50	.46	.67	9.63
	0304 12" deep		3800	0.017		12.75	.55	.79	14.09
	0350 Bank run gravel, spread and compacted								
	0370 6" deep	B-32	6000	0.005	S.Y.	3.54	.18	.26	3.98
	0390 8" deep		4900	0.007		4.71	.21	.32	5.24
	0400 12" deep		4200	0.008		7.05	.26	.38	7.69

# RS Means Cost Data

<b>02700 Bases, Ballasts, Pavements &amp; Appurtenances</b>									
<b>02740 Flexible Pavement</b>		<b>CREW</b>	<b>DAILY OUTPUT</b>	<b>LABOR HOURS</b>	<b>2006 BARE COSTS*</b>				
					<b>UNIT</b>	<b>MAT.</b>	<b>LABOR</b>	<b>EQUIP.</b>	<b>TOTAL</b>
310	<b>0010 ASPHALTIC CONCRETE PAVEMENT, HIGHWAYS</b>								
	0080 Binder course, 1-1/2" thick	B-25	7725	0.011	S.Y.	7.00	.34	.27	7.61
	0120 2" thick		6345	0.014		9.32	.42	.33	10.07
	0160 3" thick		4905	0.018		13.81	.54	.43	14.78
	0200 4" thick		4140	0.021		18.53	.64	.51	19.68
	0300 Wearing course, 1" thick	B-25B	10575	0.009		4.94	.33	.26	5.53
	0340 1-1/2" thick		7725	0.012		7.92	.38	.30	8.60
	0380 2" thick		6345	0.015		10.64	.46	.36	11.46
	0420 2-1/2" thick		5480	0.018		13.11	.54	.42	14.07
	0460 3" thick		4900	0.020		15.65	.60	.47	16.72
<b>02750 Rigid Pavement</b>		<b>CREW</b>	<b>DAILY OUTPUT</b>	<b>LABOR HOURS</b>	<b>2006 BARE COSTS*</b>				
					<b>UNIT</b>	<b>MAT.</b>	<b>LABOR</b>	<b>EQUIP.</b>	<b>TOTAL</b>
300	<b>0010 PLAIN CEMENT CONCRETE PAVEMENT, HIGHWAYS</b>								
	0015 including joints, finishing, and curing								
	0020 Fixed form, 12' pass, unreinforced, 6" thick	B-26	3000	0.029	S.Y.	21.50	.91	.90	23.31
	0030 7" thick		2850	0.031		27.00	.96	.95	28.91
	0100 8" thick		2750	0.032		29.50	.99	.98	31.47
	0200 9" thick		2500	0.035		34.50	1.09	1.08	36.67
	0300 10" thick		2100	0.042		37.00	1.30	1.28	39.58
	0400 12" thick		1800	0.049		40.00	1.52	1.50	43.02
	0500 15" thick		1500	0.059		44.50	1.82	1.80	48.12

# RS Means Cost Data

<b>02700 Bases, Ballasts, Pavements &amp; Appurtenances</b>									
<b>02785 Flexible Pavement Coating</b>		<b>CREW</b>	<b>DAILY OUTPUT</b>	<b>LABOR HOURS</b>	<b>2006 BARE COSTS*</b>				
					<b>UNIT</b>	<b>MAT.</b>	<b>LABOR</b>	<b>EQUIP.</b>	<b>TOTAL</b>
600	3240 Tack coat, emulsion, 0.05 gal per S.Y.	B-45	10000	0.002	S.Y.	.48	.05	.05	.58
	3275 0.10 gal per S.Y.		10000	0.002		.90	.05	.05	1.00
	3320 0.15 gal per S.Y.		10000	0.002		1.33	.05	.05	1.43
<b>03200 Concrete Reinforcement</b>									
<b>03210 Reinforcing Steel</b>		<b>CREW</b>	<b>DAILY OUTPUT</b>	<b>LABOR HOURS</b>	<b>2006 BARE COSTS*</b>				
					<b>UNIT</b>	<b>MAT.</b>	<b>LABOR</b>	<b>EQUIP.</b>	<b>TOTAL</b>
600	2400 Tie bars, 2 feet long, deformed, #3		520	0.031	Ea.	.35	1.22		1.57
	2410 #4		480	0.033		.63	1.32		1.95
	2420 #5		435	0.037		.98	1.45		2.43
	2430 #6		360	0.044		1.41	1.76		3.17
	2450 Longer and heavier bars, add		725	0.022	Lb.	.47	.87		1.34

# RS Means Cost Data

02300 Earthwork									
	02340 Soil Stabilization	CREW	DAILY OUTPUT	LABOR HOURS	2006 BARE COSTS*				
					UNIT	MAT.	LABOR	EQUIP.	TOTAL
100	0010 <b>ASPHALT SOIL STABILIZATION</b> , including scarifying and compaction								
	0020 Asphalt, 1-1/2" deep, 1/2 gal/S.Y.	B-75	4000	0.014	S.Y.	1.04	.46	.88	2.38
	0040 3/4 gal/S.Y.		4000	0.014		1.55	.46	.88	2.89
	0100 3" deep, 1 gal/S.Y.		3500	0.016		2.07	.53	1.00	3.60
	0140 1-1/2 gal/S.Y.		3500	0.016		3.11	.53	1.00	4.64
	0200 6" deep, 2 gal/S.Y.		3000	0.019		4.14	.62	1.17	5.93
	0240 3 gal/SY		3000	0.019		6.20	.62	1.17	7.99
	0300 8" deep, 2-2/3 gal/S.Y.		2800	0.020		5.55	.66	1.25	7.46
	0340 4gal/S.Y.		2800	0.020		8.30	.66	1.25	10.21
	0500 12" deep, 4 gal/S.Y.,		5000	0.011		8.30	.37	.70	9.37
	0540 6 gal/S.Y.		2600	0.022		12.40	.71	1.35	14.46
200	0010 <b>CEMENT SOIL STABILIZATION</b> , including scarifying and compaction								
	1020 Cement, 4% mix, by volume. 6" deep	B-74	1100	0.058	S.Y.	1.02	1.89	3.46	6.37
	1030 8" deep		1050	0.061		1.33	1.98	3.63	6.94
	1060 12" deep		960	0.067		1.99	2.17	3.97	8.13
	1100 6% mix, 6" deep		1100	0.058		1.46	1.89	3.46	6.81
	1120 8" deep		1050	0.061		1.90	1.98	3.63	7.51
	1160 12" deep		960	0.067		2.87	2.17	3.97	9.01
	1200 9% mix, 6" deep		1100	0.058		2.21	1.89	3.46	7.56
	1220 8" deep		1050	0.061		2.87	1.98	3.63	8.48
	1260 12" deep		960	0.067		4.33	2.17	3.97	10.47
	1300 12% mix, 6" deep		1100	0.058		2.87	1.89	3.46	8.22
	1320 8" deep		1050	0.061		3.85	1.98	3.63	9.46
500	0010 <b>LIME SOIL STABILIZATION</b> , including scarifying and compaction								
	2100 4% mix by weight, 6" deep	B-74	1800	0.036	S.Y.	2.77	1.16	2.12	6.05
	2120 8" deep		1700	0.038		3.75	1.23	2.24	7.22
	2160 12" deep		1550	0.041		5.60	1.34	2.46	9.40
	2200 6% mix, 6" deep		1800	0.036		4.20	1.16	2.12	7.48
	2220 8" deep		1700	0.038		5.60	1.23	2.24	9.07
	2260 12" deep		1550	0.041		8.35	1.34	2.46	12.15

# Lift Thicknesses

# Mineral-Aggregate Base

*If the required compacted depth of the base course exceeds six inches, the base shall be constructed in two or more layers of approximate equal thickness.*

*The maximum compacted thickness of any one layer shall not exceed six inches except when vibrating or other approved types of special compacting equipment are used, the compacted depth of a single layer of the base course may be increased to eight inches upon approval of the Engineer.*

# Aggregate-Bituminous Base

*Each course shall have a thickness after compaction of not more than four inches, unless otherwise authorized by the Engineer..*

# HMA Surface and Binder

Mixture	Single Lift Laying Thickness Inches	
	Minimum	Maximum
25 mm	3	4
19 mm	2 ¼	3
12.5 mm	1 ½	2
9.5 mm	1	1 ½
4.75 mm	½	¾

Binder Courses

Surface Courses

Source: MDOT (2004) Standard Specifications for Road and Bridge Construction